



General

Guideline Title

American Cancer Society guidelines on nutrition and physical activity for cancer prevention: reducing the risk of cancer with healthy food choices and physical activity.

Bibliographic Source(s)

Kushi LH, Doyle C, McCullough M, Rock CL, Demark-Wahnefried W, Bandera EV, Gapstur S, Patel AV, Andrews K, Gansler T, American Cancer Society 2010 Nutrition and Physical Activity Guidelines Advisory. American Cancer Society guidelines on nutrition and physical activity for cancer prevention: reducing the risk of cancer with healthy food choices and physical activity. *CA Cancer J Clin*. 2012 Jan-Feb;62(1):30-67. [376 references] [PubMed](#)

Guideline Status

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It updates a previous version: Kushi LH, Byers T, Doyle C, Bandera EV, McCullough M, McTiernan A, Gansler T, Andrews KS, Thun MJ, American Cancer Society 2006 Nutrition and Physical Activity Guidelines Advisory Committee. American Cancer Society Guidelines on Nutrition and Physical Activity for cancer prevention: reducing the risk of cancer with healthy food choices and physical activity. *CA Cancer J Clin* 2006 Sep-Oct;56(5):254-81; quiz 313-4. [198 references]

Recommendations

Major Recommendations

In addition to recommendations regarding individual choices related to weight control, physical activity, and diet, the American Cancer Society (ACS) Guidelines underscore what communities can and should do to facilitate healthy eating and physical activity behaviors.

ACS Guidelines on Nutrition and Physical Activity for Cancer Prevention

ACS Recommendations for Individual Choices

Achieve and maintain a healthy weight throughout life.

- Be as lean as possible throughout life without being underweight.
- Avoid excess weight gain at all ages. For those who are currently overweight or obese, losing even a small amount of weight has health benefits and is a good place to start.
- Engage in regular physical activity and limit consumption of high-calorie foods and beverages as key strategies for maintaining a healthy

weight.

Adopt a physically active lifestyle.

- Adults should engage in at least 150 minutes of moderate intensity or 75 minutes of vigorous intensity activity each week, or an equivalent combination, preferably spread throughout the week.
- Children and adolescents should engage in at least 1 hour of moderate or vigorous intensity activity each day, with vigorous intensity activity occurring at least 3 days each week.
- Limit sedentary behavior such as sitting, lying down, watching television, or other forms of screen-based entertainment.
- Doing some physical activity above usual activities, no matter what one's level of activity, can have many health benefits.

Consume a healthy diet, with an emphasis on plant foods.

- Choose foods and beverages in amounts that help achieve and maintain a healthy weight.
- Limit consumption of processed meat and red meat.
- Eat at least 2.5 cups of vegetables and fruits each day.
- Choose whole grains instead of refined grain products.

If you drink alcoholic beverages, limit consumption.

- Drink no more than 1 drink per day for women or 2 per day for men.

ACS Recommendations For Community Action

Public, private, and community organizations should work collaboratively at national, state, and local levels to implement policy and environmental changes that:

- Increase access to affordable, healthy foods in communities, worksites, and schools, and decrease access to and marketing of foods and beverages of low nutritional value, particularly to youth.
- Provide safe, enjoyable, and accessible environments for physical activity in schools and worksites, and for transportation and recreation in communities.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Cancer, including types of cancer in which weight, diet and physical activity may play a role, such as breast cancer, colorectal cancer, endometrial cancer, kidney cancer, lung cancer, ovarian cancer, pancreatic cancer, prostate cancer, stomach cancer, and upper aerodigestive tract cancers

Guideline Category

Counseling

Prevention

Risk Assessment

Clinical Specialty

Family Practice

Geriatrics

Internal Medicine

Nursing

Nutrition

Obstetrics and Gynecology

Oncology

Pediatrics

Preventive Medicine

Intended Users

Advanced Practice Nurses

Allied Health Personnel

Dietitians

Health Care Providers

Health Plans

Hospitals

Managed Care Organizations

Nurses

Patients

Physician Assistants

Physicians

Public Health Departments

Guideline Objective(s)

- To advise health care professionals, policymakers and the general public about dietary and other lifestyle practices that reduce cancer risk
- To serve as a foundation for the communication, policy, and community strategies of the American Cancer Society (ACS) and to affect dietary and physical activity patterns among Americans
- To update the 2006 American Cancer Society Guidelines on Nutrition and Physical Activity for Cancer Prevention

Target Population

Children, adolescents, and adults seen in primary care settings in the United States

Interventions and Practices Considered

1. Individual choices regarding diet and physical activity patterns
 - Achieving and maintaining a healthy weight throughout life
 - Adopting a physically active lifestyle

- Consuming a healthy diet, with an emphasis on plant sources
 - Limiting consumption of alcoholic beverages
2. Community actions that facilitate social and physical environments that support adoption of healthful nutrition and physically active behaviors

Major Outcomes Considered

Incidence of cancer
Quality of life
Cancer-related mortality

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

The Committee reviewed evidence from human population studies and laboratory experiments published since the last release of the Guidelines in 2006. The Committee also considered other comprehensive reviews of diet, obesity, and physical inactivity in relation to cancer. For many aspects of nutrition and physical activity, the most thorough reviews were the 2007 World Cancer Research Fund/American Institute for Cancer Research (WCRF/AICR) report and the subsequent Continuous Update reports on breast cancer and colorectal cancer; other comprehensive reviews or meta-analyses that were published in recent years were also considered.

PubMed was searched from 2005 to August 2010 using the following criteria:

- Search terms: varied by individual topics/exposures
- Study design: randomized controlled trials, prospective studies, and well-conducted, population-based, case-control studies
- Study size: more than 200 cancer cases, except for rarer cancers, when 100 would be acceptable (e.g., ovary, pancreas, endometrial)
- High-quality assessment of covariates and analytic methods: analyses controlled for important confounders (e.g., energy and other important risk factors for that particular cancer)

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Expert Consensus

Rating Scheme for the Strength of the Evidence

Not applicable

Methods Used to Analyze the Evidence

Review

Review of Published Meta-Analyses

Description of the Methods Used to Analyze the Evidence

In weighing the evidence from randomized controlled trials (RCTs), the Committee considered the findings in relation to the design of the trial, the specific question being addressed, and the importance of the trial results in the context of other evidence from human populations. Prospective cohort studies were weighted more heavily than case-control studies, especially when results were available from several cohorts. Population-based case-control studies with at least 200 cases of cancer were considered more informative than smaller or hospital-based case-control studies. Studies that adjusted for total energy intake, considered other dietary factors, and controlled for other known risk factors were considered more credible than those that failed to meet these criteria.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

These Guidelines, updated in 2012 by the American Cancer Society (ACS) Nutrition and Physical Activity Guidelines Advisory Committee, are based on synthesis of the current scientific evidence on diet and physical activity in relation to cancer risk.

These Guidelines are based on the totality of evidence from these sources, taking into account both the potential health benefits and possible risks from adopting them.

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

This report was approved by the American Cancer Society National Board of Directors on August 5, 2011.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of evidence is not specifically stated for each recommendation.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- Behaviors such as avoiding exposure to tobacco products, maintaining a healthy weight, staying physically active throughout life, and

consuming a healthy diet can substantially reduce one's lifetime risk of developing or dying from cancer.

- The recommendations for community action recognize that a supportive social and physical environment is indispensable if individuals at all levels of society are to have genuine opportunities to choose and maintain healthy behaviors.

Potential Harms

Men aged 40 years and older, women aged 50 years and older, and people with chronic illnesses or established cardiovascular risk factors should consult their physicians before beginning a vigorous physical activity program.

Qualifying Statements

Qualifying Statements

- For many issues concerning nutrition and cancer, the evidence is not definitive because the published results are inconsistent or because the methods of studying nutrition and chronic disease in human populations continue to evolve. Part of the uncertainty has resulted from studies that focus on specific nutrients or foods in isolation, thereby oversimplifying the complexity of foods and dietary patterns; the importance of the dose, timing, and duration of exposure; and the large variations in nutritional status among human populations. Nutrition and physical activity research is equally challenging in randomized controlled trials (RCTs), generally considered the gold standard for scientific inference. Studies may fail to find an effect if the intervention begins too late in life, is too small, or if the follow-up is too short for a benefit to appear. In addition, RCTs of lifestyle interventions cannot be blinded, and disease endpoints such as cancer require many years of follow-up. No single trial can resolve all of the questions that are relevant to the potential effects of nutrition throughout the lifespan. Moreover, many important questions about how diet, physical activity, and obesity relate to cancer cannot presently be addressed in RCTs. For example, while there is substantial interest in the effects of early-life body size and dietary patterns on the risk of adult cancer, it is practically not feasible to conduct RCTs to determine the long-term consequences of interventions that begin in infancy and extend for many years.
- Inferences about the many complex interrelationships between body weight, physical activity, diet, and cancer risk are therefore based, for the most part, on a combination of shorter-term clinical trials and observational studies coupled with advancing understanding of the biology of cancer. These Guidelines are based on the totality of evidence from these sources, taking into account both the potential health benefits and possible risks from adopting them. No diet or lifestyle pattern can guarantee full protection against any disease; the potential health benefit represents a decreased likelihood that the disease will occur, not a guarantee of total protection. These Guidelines provide a summary of the existing scientific information about weight control, physical activity, and nutrition in relation to cancer and are intended to be followed as a whole.
- While there continues to be scientific uncertainty about how specific aspects of excess adiposity, excessive energy intake, and physical inactivity relate to cancer, there is no debate that these contribute to an increased risk of many types of cancer and that they constitute a serious and growing health problem.
- Health professionals who counsel patients should emphasize that no one study provides the last word on any subject, and that individual news reports may overemphasize what appear to be contradictory or conflicting results.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Patient Resources

For information about availability, see the *Availability of Companion Documents and Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2002 Mar (revised 2012 Jan)

Guideline Developer(s)

American Cancer Society - Disease Specific Society

Source(s) of Funding

American Cancer Society

Guideline Committee

American Cancer Society 2010-11 Nutrition and Physical Activity Guidelines Advisory Committee

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Financial Disclosures/Conflicts of Interest

The authors report no conflicts of interest.

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Guideline Availability

Electronic copies: Available from the [CA: A Cancer Journal for Clinicians Web site](#) .

Print copies: Available from the American Cancer Society, 250 Williams St., Suite 600, Atlanta, GA 30303; Web site: www.cancer.org

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Availability of Companion Documents

None available

Patient Resources

The following is available:

- American Cancer Society guidelines on nutrition and physical activity for cancer prevention. Patient summary. 2012. 30 p. Available in Portable Document Format (PDF) from the [American Cancer Society \(ACS\) Web site](#) .

Also available by calling 1-800-227-2345.

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NGC Status

This NGC summary was completed by ECRI on January 13, 2004. It was updated by ECRI Institute on February 4, 2008. The updated information was verified by the guideline developer on February 29, 2008. This summary was updated by ECRI Institute on June 6, 2012. The updated information was verified by the guideline developer on July 2, 2012.

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